DISA

Defense Information Systems Agency

A Combat Support Agency

# JITC Command Brief

Mr. Stu Brock
Deputy Commander
Joint Interoperability Test Command

Mission & Vision

Mission: Conduct DoD-wide Systems of Systems (SoS) joint interoperability test, certification, operational testing, and analysis to enhance combat effectiveness and support investment decisions in Warfighting, National Intelligence, and Business mission areas

Vision: Creation of the integrated, DoD-wide, mission area focused test and evaluation capability which enables the rapid deployment of interoperable and operationally effective Information Technology (IT) and National Security Systems (NSS)

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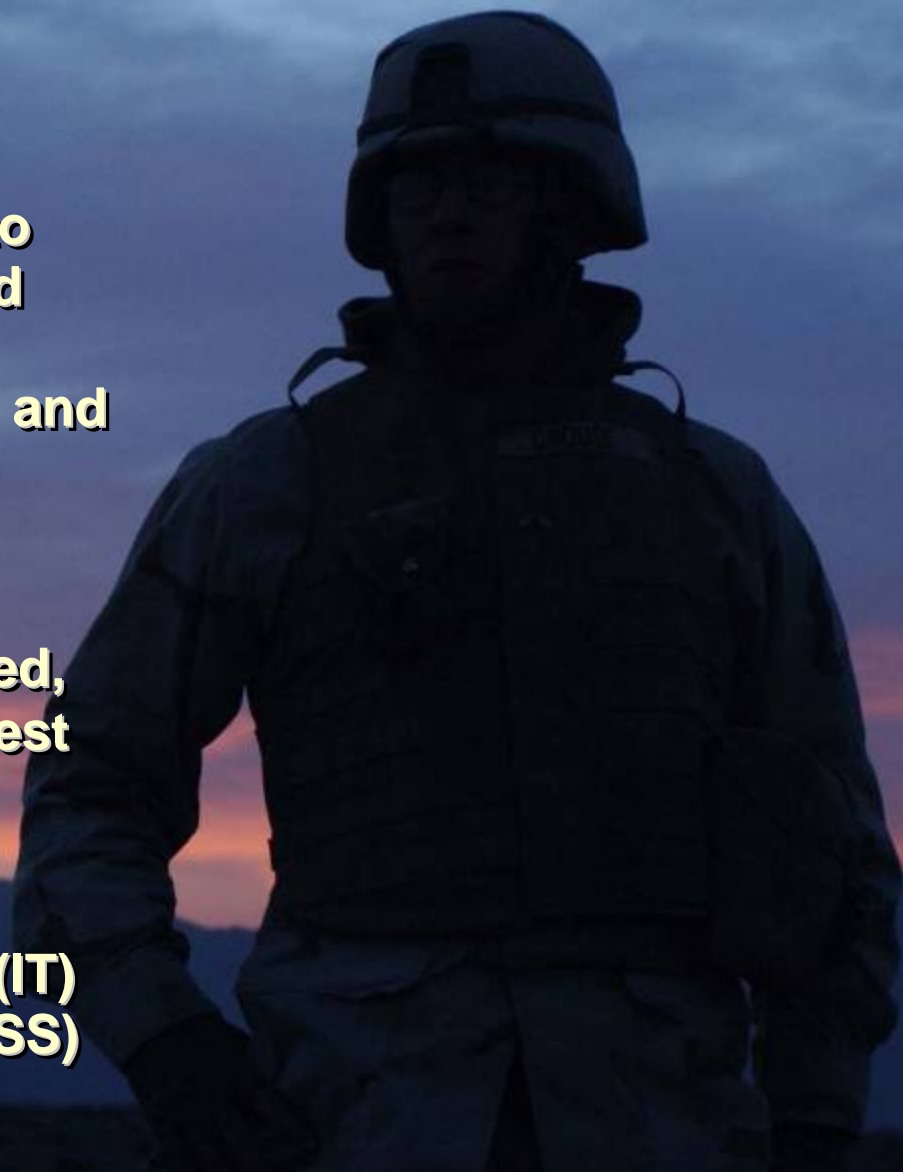
JITC Roles
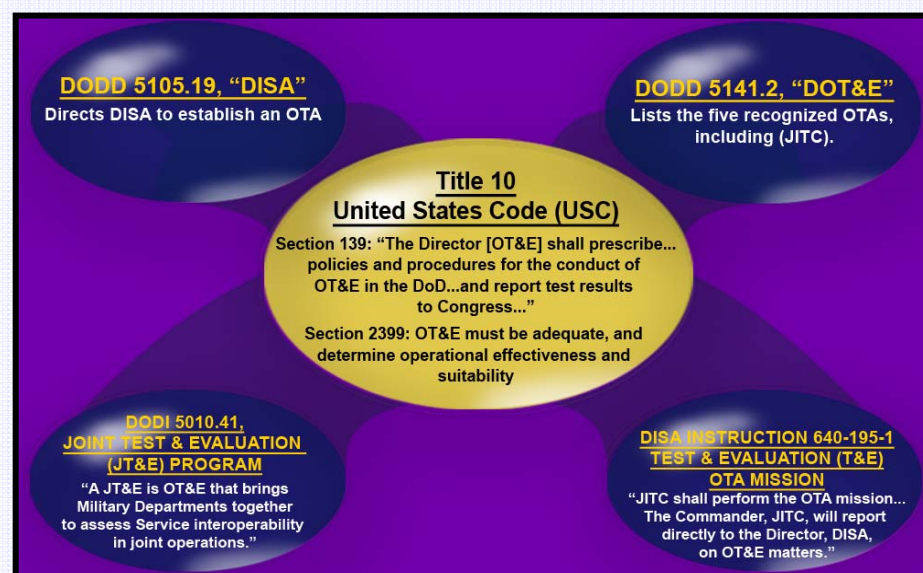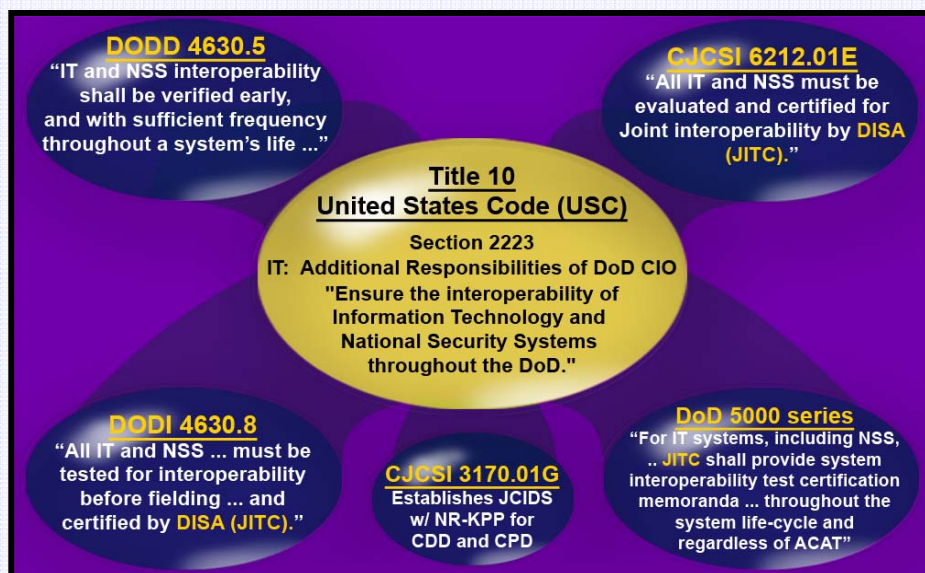
- *Joint Interoperability Certifier*
  - DoD's Information Technology (IT) and National Security Systems (NSS)

- *Operational Test Agency*
  - DISA and other DoD elements

- *Warfighter Joint and Coalition Interoperability Support*
  - COCOMs during their exercises, contingencies, and operations

Major Range and Test Facility Base (MRTFB)

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Authority

JS - Interoperability Certification

DODD 4630.5
"IT and NSS interoperability shall be verified early, and with sufficient frequency throughout a system's life ..."

CJCSI 6212.01E
"All IT and NSS must be evaluated and certified for Joint interoperability by DISA (JITC)."

Title 10
United States Code (USC)
Section 2223
IT: Additional Responsibilities of DoD CIO
"Ensure the interoperability of Information Technology and National Security Systems throughout the DoD."

DODI 4630.8
"All IT and NSS ... must be tested for interoperability before fielding ... and certified by DISA (JITC)."

CJCSI 3170.01G
Establishes JCIDS w/ NR-KPP for CDD and CPD

DoD 5000 series
"For IT systems, including NSS, .. JITC shall provide system interoperability test certification memoranda ... throughout the system life-cycle and regardless of ACAT"

DOT&E - Operational Test Reports

DODD 5105.19, "DISA"
Directs DISA to establish an OTA

DODD 5141.2, "DOT&E"
Lists the five recognized OTAs, including (JITC).

Title 10
United States Code (USC)
Section 139: "The Director [OT&E] shall prescribe... policies and procedures for the conduct of OT&E in the DoD...and report test results to Congress..."
Section 2399: OT&E must be adequate, and determine operational effectiveness and suitability

DODI 5010.41,
JOINT TEST & EVALUATION (JT&E) PROGRAM
"A JT&E is OT&E that brings Military Departments together to assess Service interoperability in joint operations."

DISA INSTRUCTION 640-195-1
TEST & EVALUATION (T&E) OTA MISSION
"JITC shall perform the OTA mission... The Commander, JITC, will report directly to the Director, DISA, on OT&E matters."

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Warfighter Support

- **Provide the COCOMs with direct support to help identify and resolve joint / coalition interoperability issues at home station and deployed**

Contingency & Exercise Support

Hot Line Support

- **24/7 Technical Support**
- **Fielding roughly a call a day**
- **1-800-LET-JITC (538-5482)**
- **DSN: TRY-JITC (879-5482)**
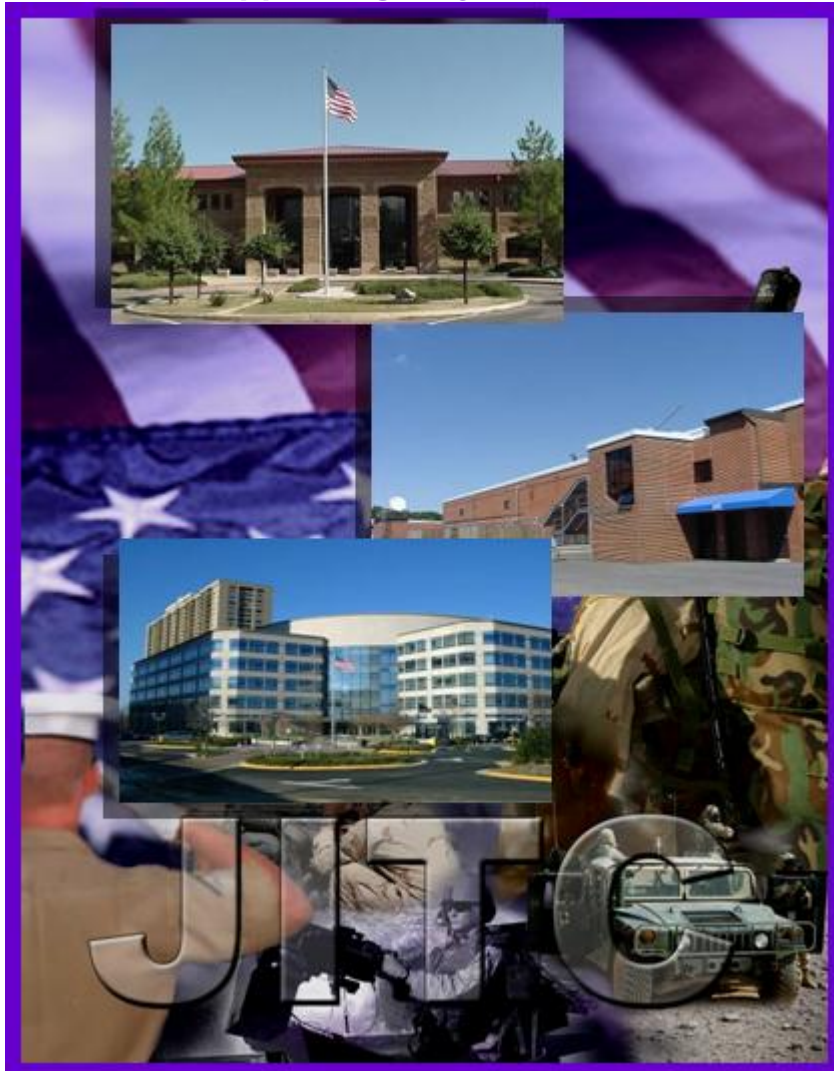- **hotline@disa.mil**
- **hotline@fhu.disa.smil.mil**
- **http://jitc.fhu.disa.mil**

Leveraging JITC's extensive experience base in support of the WARFIGHTER

Since 1989, 24/7 Technical Support for the Warfighter

Personnel & Facilities

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FORT HUACHUCA, AZ

CIVILIAN	MILITARY	CONTRACTOR	TOTAL
176	36	678	890

Lab Space 213,104 sq. ft.

INDIAN HEAD, MD

CIVILIAN	MILITARY	CONTRACTOR	TOTAL
66	26	145	237

Lab Space 108,868 sq. ft.

FALLS CHURCH, VA

CIVILIAN	MILITARY	CONTRACTOR	TOTAL
16	1	70	87

* LNO at CENTCOM
* JS J6 Liaison in NCR

1,200+ personnel at 3 JITC locations

TOTAL Reimbursable Funding for Divisions and Portfolios: $79.3 Million

Pie chart segments:
- Other Misc DoD, 9.3
- Navy, 6.7
- DoD WHS, 0.7
- Army, 6.6
- USSOCOM, 2.5
- Air Force, 7.6
- TRMC, 3.9
- Commercial, 2.1
- NGA, 2.2
- BTA, 6.4
- DISA, 20.8
- NSA, 7.8
- MHS, 1.2
- Other US Gov't, 1.5 (FEMA, DOE, GSA)
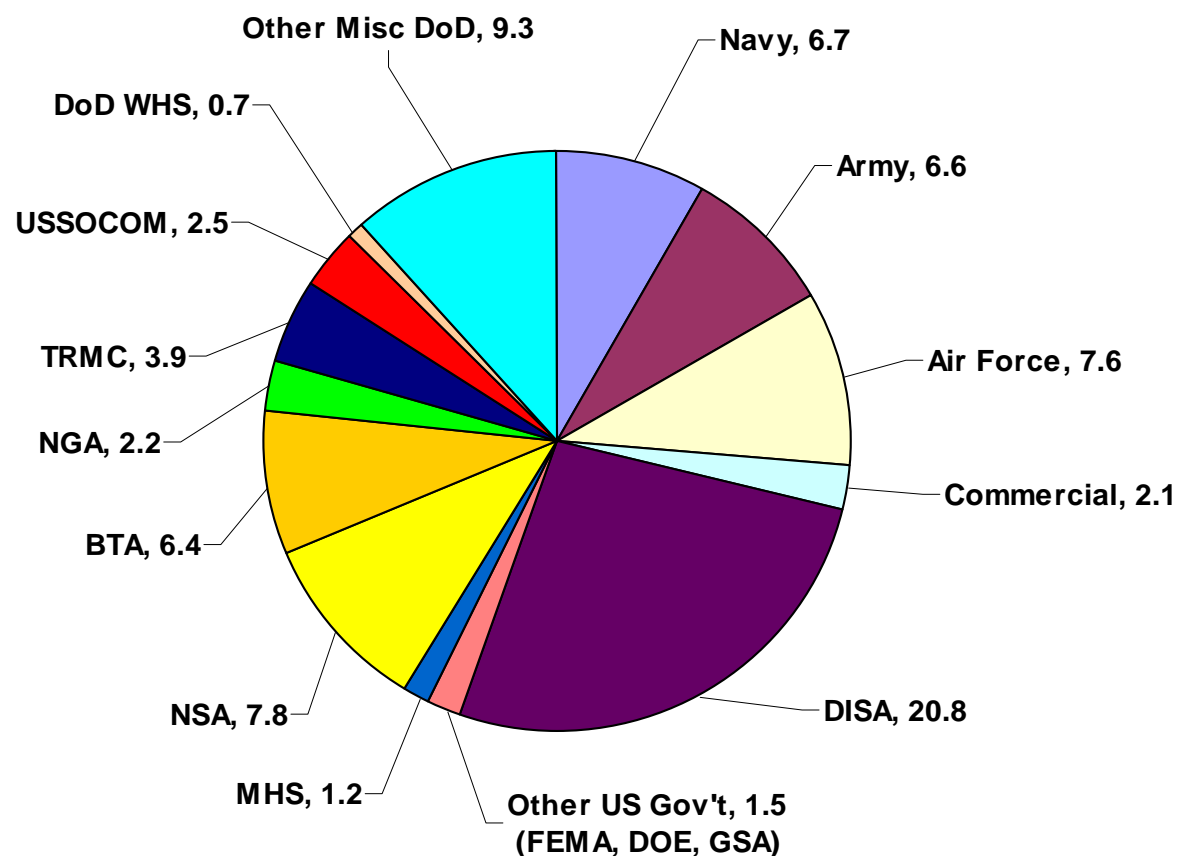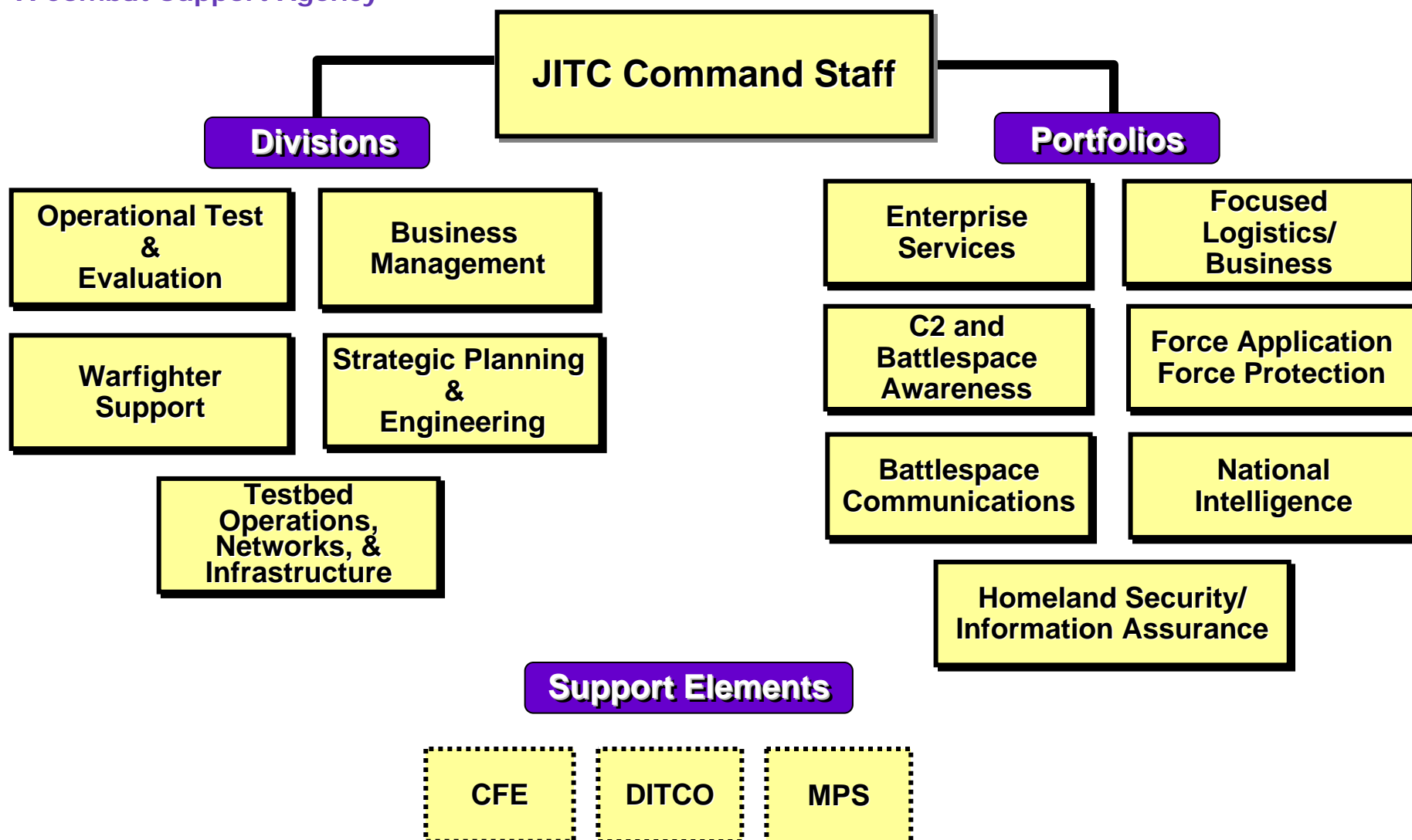
Alignment with CPs

DoD Capability Portfolio	JITC Test Portfolio
Command and Control	C2 Battlespace Awareness
Battlespace Awareness	C2 Battlespace Awareness National Intelligence
Net-Centric	Enterprise Services Battlespace Communications Homeland Security/IA
Logistics	Focused Logistics/Business
Protection	Homeland Security/IA Force Application/Force Protection
Force Application	Force Application/Force Protection
Force Support	Focused Logistics/Business
Corporate Management Support	Focused Logistics/Business
Building Partnerships	N/A

■ Interim Phase through FY10 POM

FY10 Reimbursable Funding by Portfolio
(through 10 May 10)

100% = $64.2M

Homeland Security/Information Assurance
9%

Enterprise Services
3%

Focused Logistics & Business
19%

National Intelligence
23%

C2 Battlespace Awareness
11%

Battlespace Communications
25%

Force Application/Force Protection
10%
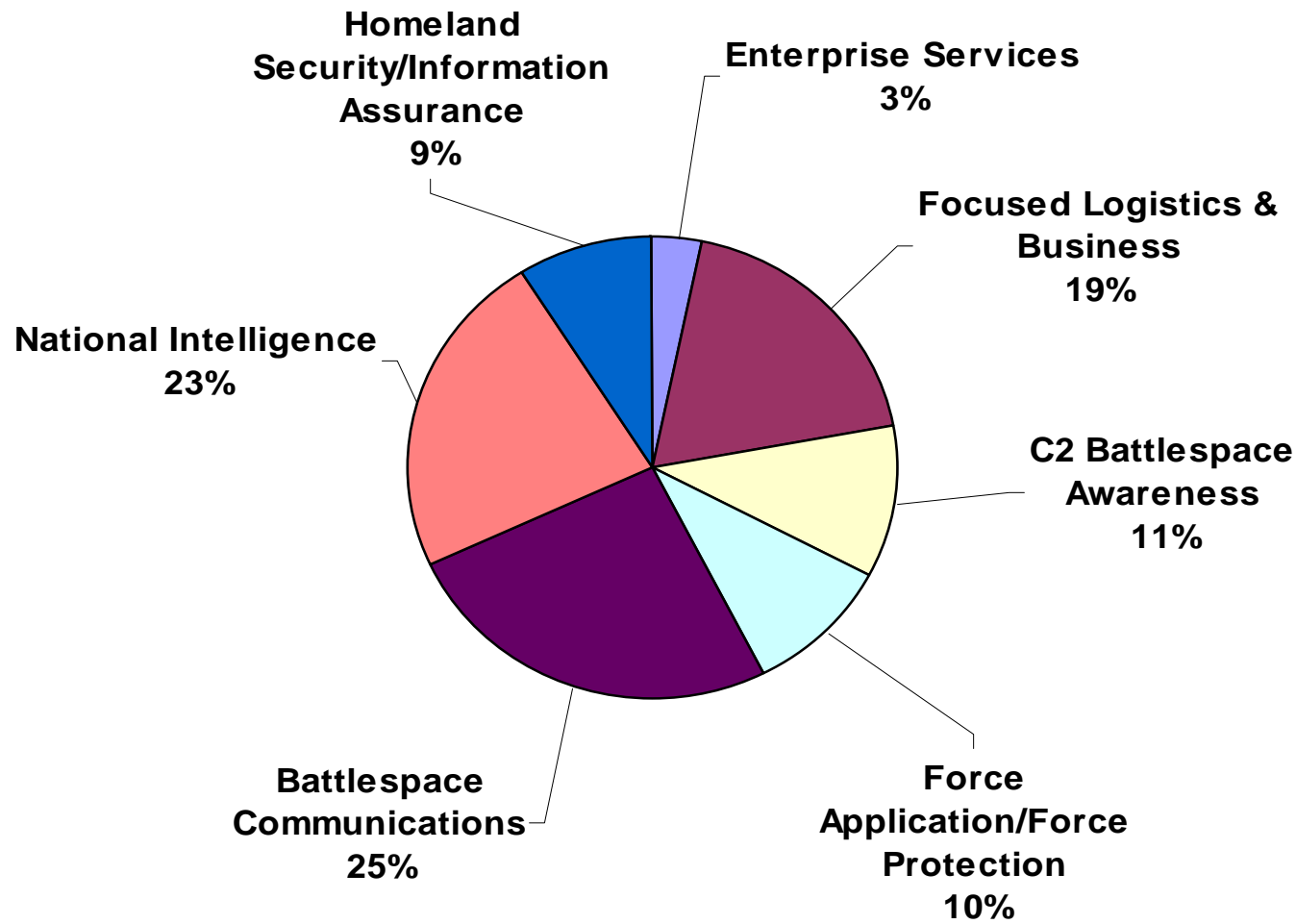
* $15.1M Additional Reimbursable Funding in Divisions

NR-KPP Elements

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Operationally Effective E2E Information Exchange

Evaluate based on Measure of Effectiveness derived from Operational and System Architectures

Net-Centric Data and Services

Evaluate visibility, accessibility, understandability and compliance to DoD Information Enterprise Architecture

Assured Information

Verify C&A status, and that IOP testing is conducted using the approved IA configuration

GIG Standards Compliance

Evaluate compliance with Standards and applicable GIG Enterprise Service Profiles

Supportability (Spectrum, JTRS, SAASM, TDL Implementations)

Verify programs comply with respective policy and guidance

JITC Interoperability Certification is based on NR-KPP requirements in CPD and ISP\TISP

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End-to-End Interoperability

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System to System

PATRIOT
Operator/Display

Knowledge/Information

Host to Host

PATRIOT

Data

Radio to Radio

010110   010110

RF

AEGIS

Data

Data Link

Display to Display

Operator to Operator

AEGIS
Operator/Display

Knowledge/Information

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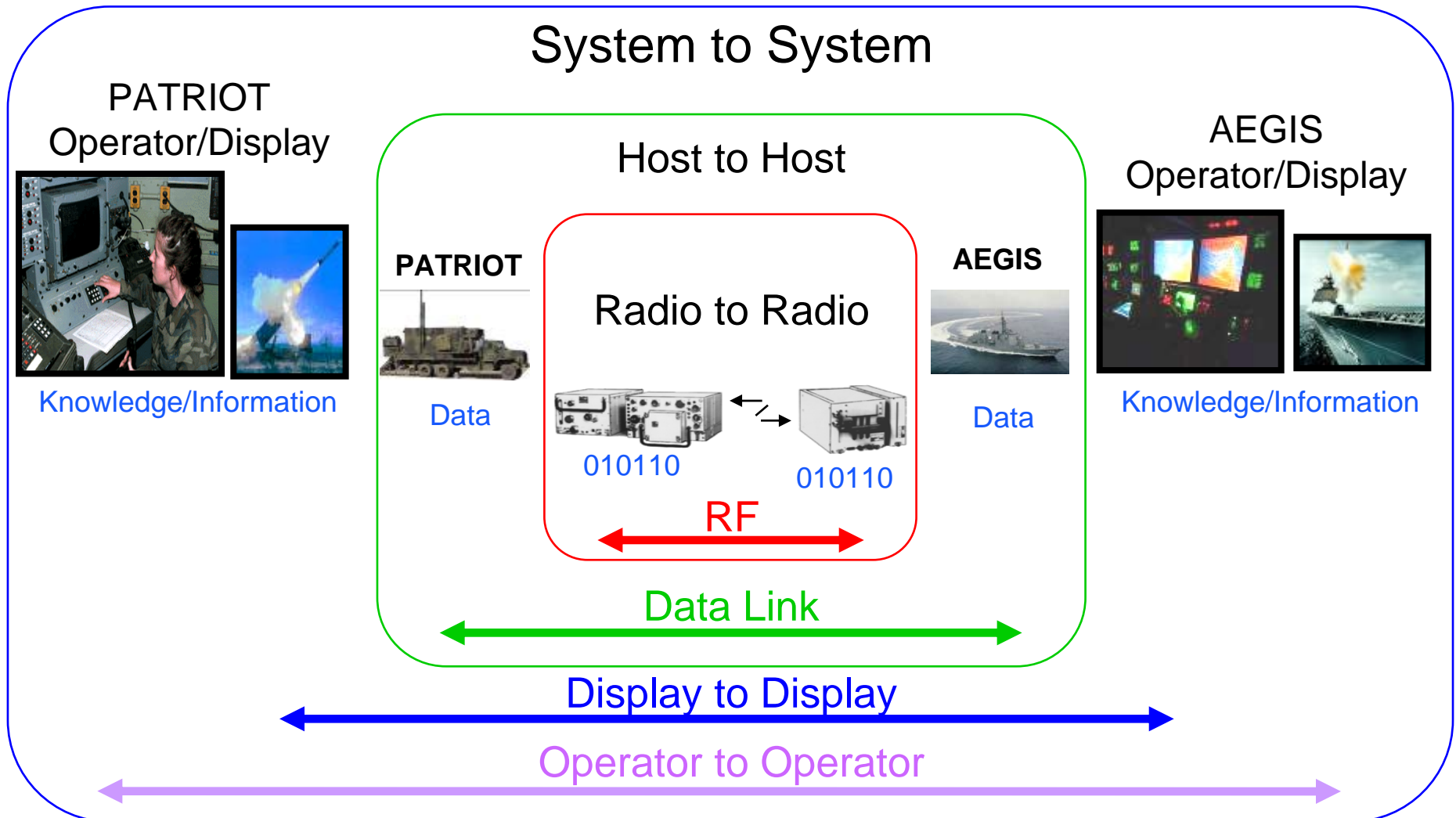
Mapping NR-KPP to Operational Impact
(notional example)

Capability	Operational Activity	System Function	Interface	Data & Services	Standards
JMT	OV-5	SV-4	SV-6	EVTS	TV-1
Joint C2	Understand Blue Force Resource States	Blue Force Location Auto Track Feed	(T) FBCB2 EPLRS (T) BFT SATCOM	Service: Blue Force Ground Data – Current Service: Blue Force Ground Data – Projected Data: JBFSA Schema/BFT COI	WSDL UDDI XML WS-I Basic Profile SOAP
		Blue Force Location ISR Sensors	(T) BFT SATCOM (O) DCGS-A		

Compliant Solution Architectures
(Operationally Effective Information Exchanges)

Net-Centric Data & Services

GIG Technical Guidance

Information Assurance & Supportability

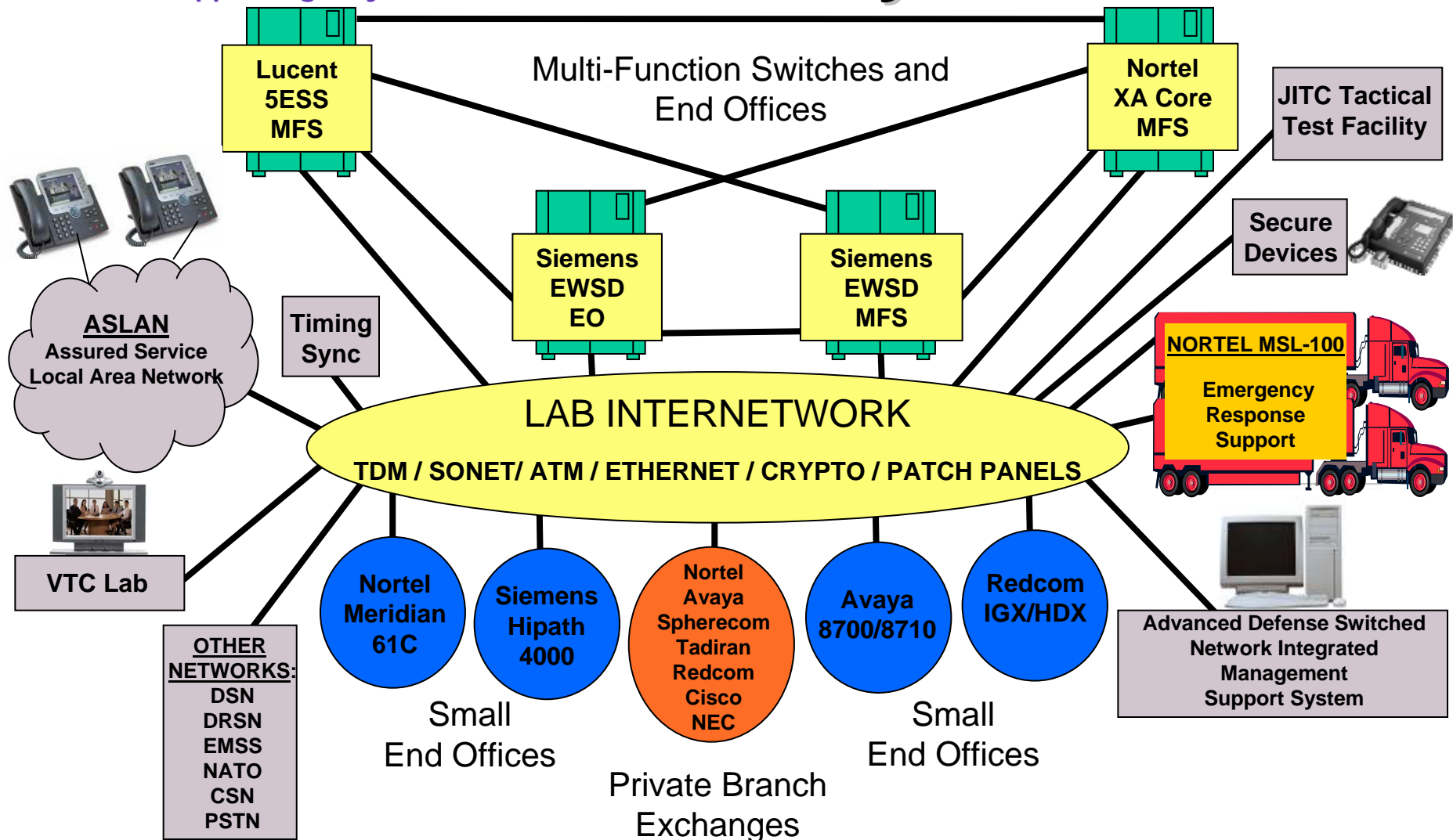# Optical and Wireless Capabilities

- **Replicates high bandwidth backbone & wireless edge**

- **Optical testing capability up to 10 Gbps (OC192)**
  - **Gigabit Ethernet**
  - **Packet-Over-Sonet**
  - **Optical Switching**

- **Wireless lab integrated into the distributed test network**
  - **802.11 WLAN**
  - **802.16**
  - **Bluetooth and Freespace Optics**

- **Employs multi-technology mix from multiple vendors**

- **Supports Proof of Concept assessments with industry and certification testing of DoD Programs**

**High bandwidth and high mobility are critical to information superiority**

Global Network Test Facility

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Multi-Function Switches and End Offices

Lucent 5ESS MFS

Nortel XA Core MFS

JITC Tactical Test Facility

Siemens EWSD EO

Siemens EWSD MFS

Secure Devices

ASLAN
Assured Service Local Area Network

Timing Sync

NORTEL MSL-100
Emergency Response Support

LAB INTERNETWORK

TDM / SONET/ ATM / ETHERNET / CRYPTO / PATCH PANELS

VTC Lab

OTHER NETWORKS:
DSN
DRSN
EMSS
NATO
CSN
PSTN

Nortel Meridian 61C

Siemens Hipath 4000

Nortel Avaya Spherecom Tadiran Redcom Cisco NEC

Avaya 8700/8710

Redcom IGX/HDX

Small End Offices

Small End Offices

Private Branch Exchanges

Advanced Defense Switched Network Integrated Management Support System

$50M Replicated GIG Backbone Allows Streamlined Alternative to JCIDS Acquisition for Converged Voice, Video, and Data

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JITC Support to EC10 Event

4 Primary Focus Areas:

- DCGS Enterprise Assessment
  - DIB Federation
  - Multinational Data Sharing
  - Service Component DCGS Systems

- Technical Assessment
  - Net-Centric Data and Services Strategy of NR-KPP
  - Motion Imagery (MI) Standards Conformance
  - Still Imagery (NITF/GMTI) Standards Conformance

- DOT&E Independent Assessments
  - Interoperability (IOP)
  - Information Assurance (IA)

- Networks
  - DDTE Enterprise Services (US SECRET, ONLY)
  - CFBLNet Blackbone (UCSN, CFE, KSAF)
  - Cross-Domain Solution Architecture and Hosting
  - Key Infrastructure at JITC
    - CENTAUR Cross-Domain Solution
    - Valiant Angel
    - Tactical Data Link/Link 16 Hardware
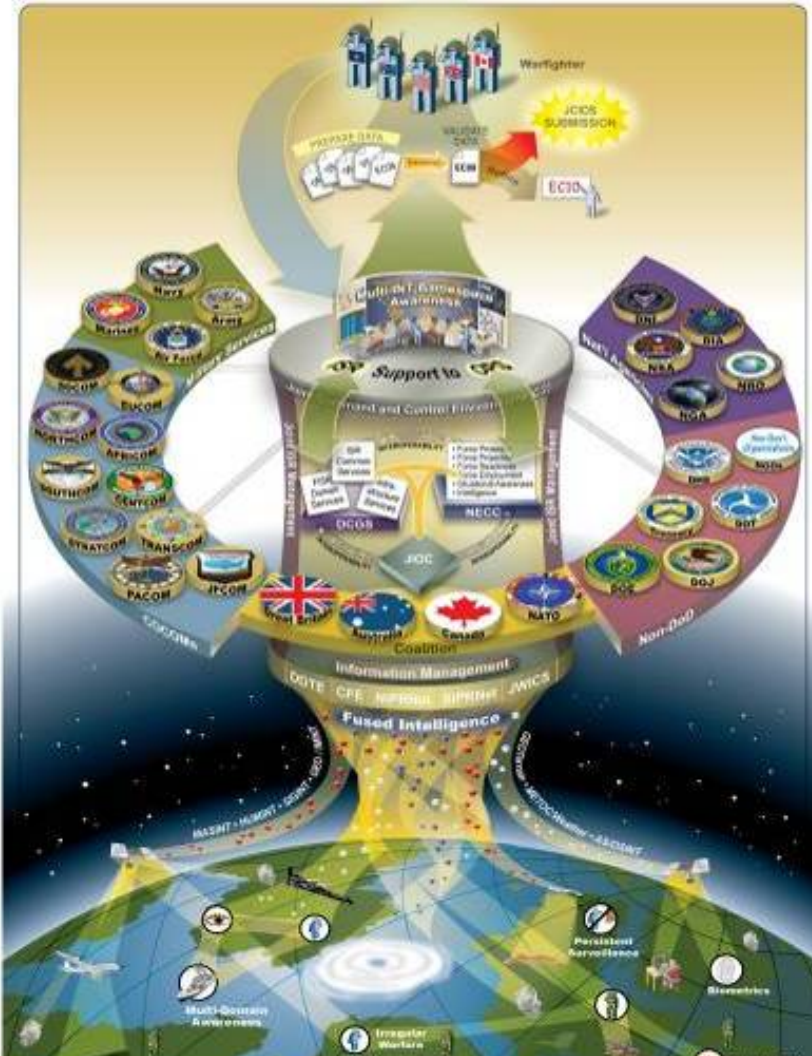
Facilitates Key Network Infrastructure and Helps to Publish Capability-Specific Assessments Enabling Rapid Fielding to Meet Warfighter Requirements

Combined Endeavor

- **Program that encourages nations in the EUCOM AOR to develop relationships with the United States and other countries through the Interoperability Testing of military communications systems.**
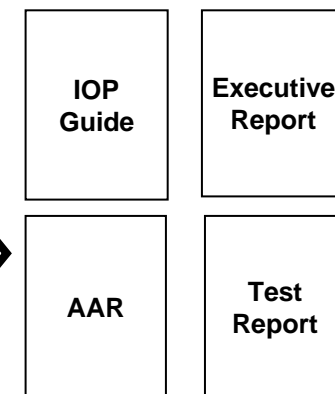
40+ Countries **Interoperability Testing** **JITC Products**

IOP Guide	Executive Report
AAR	Test Report

CEPTR **Test Plan** **Test Results** **CEPTR**
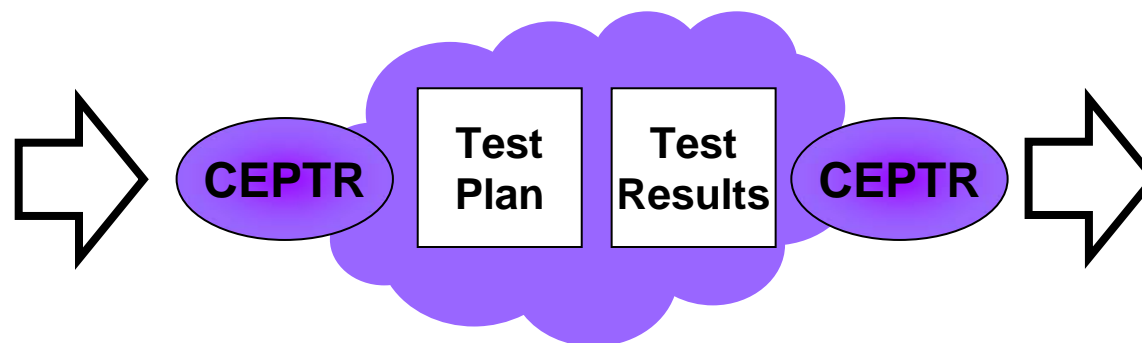
CEPTR – JITC developed test application

Improved Multi-National Interoperability

JITC serves as the Endeavor series Test Assessment Lead for EUCOM, AFRICOM and PACOM

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- **Triannual JS/JFCOM-sponsored exercise focused on**
  - **Streamlined interoperability testing and certification**
  - **Unit-level training in diverse environment**
  - **Collaboration among DoD, Local, State, Federal, and non-government organizations**

- **Replicates complex Joint Task Force communications network**

- **Utilizes operational warfighting systems with their actual users**

- **Integrates in new technologies from developers and industry partners**

- **DICE 2009**
  - **Hosted three DICE events**
    - **60+ systems/capabilities participated**
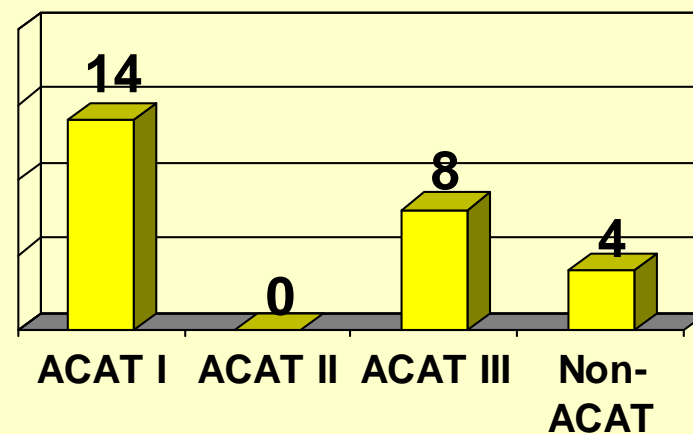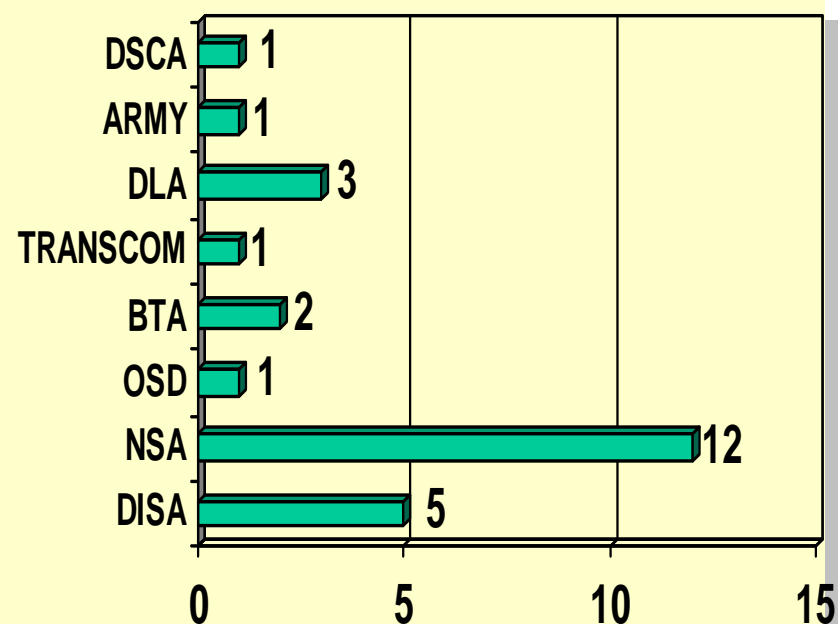   - **30 system/capability assessments or certifications**

Increased Operational Realism with Reduced Acquisition Timelines & Testing Costs

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JITC OT&E Support

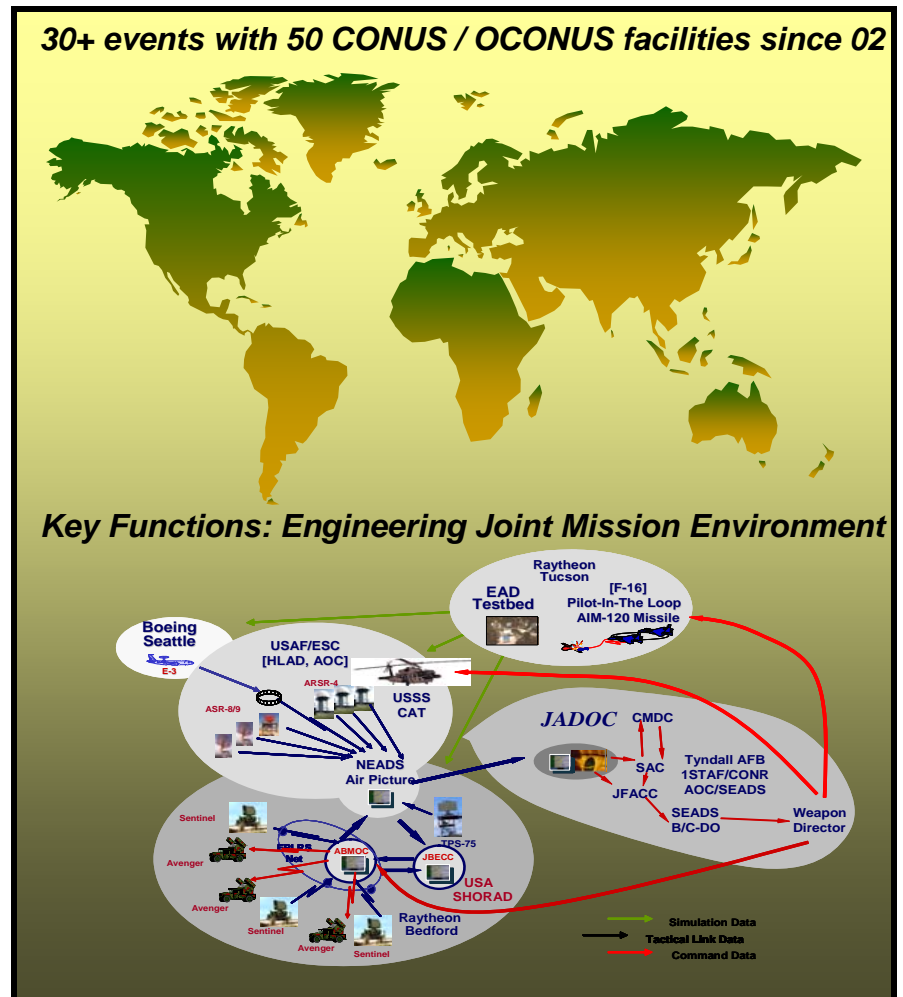**A Combat Support Agency**

- **Chartered as DISA's Operational Test Agency**

- **Brief DOT&E on the planning, conduct, and results of OT&E for oversight programs**

- **Determine system operational effectiveness, operational suitability, and survivability in operational realistic environments**

- **Reporting requirement to Milestone Decision Authority, Program of Record, DOT&E, and User Representative**

- **Focused on Information Technology Systems**

DSCA 1
ARMY 1
DLA 3
TRANSCOM 1
BTA 2
OSD 1
NSA 12
DISA 5

0   5   10   15

ACAT I 14
ACAT II 0
ACAT III 8
Non-ACAT 4

7 On DOT&E Oversight

Federation Expertise

- **30+ events with 50 CONUS / OCONUS facilities since 2002**
    - **Joint Tactical Data Link testing**
    - **SIAP Joint Combined HWIL events**
    - **Distributed Common Ground System Integration Backbone (DIB)**
    - **NECC Blue Force Tracking**
    - **NCES PVT DT/OT support**
    - **NATO Tactical Data Link**
    - **Combined Interoperability Test**

- **Areas of expertise**
    - **Joint mission environment engineering (sys engineering)**
    - **M&S and test tools development**
    - **Network Support & Site Integration**

30+ events with 50 CONUS / OCONUS facilities since 02

Key Functions: Engineering Joint Mission Environment

Testing and certification experience in Joint distributed mission environments
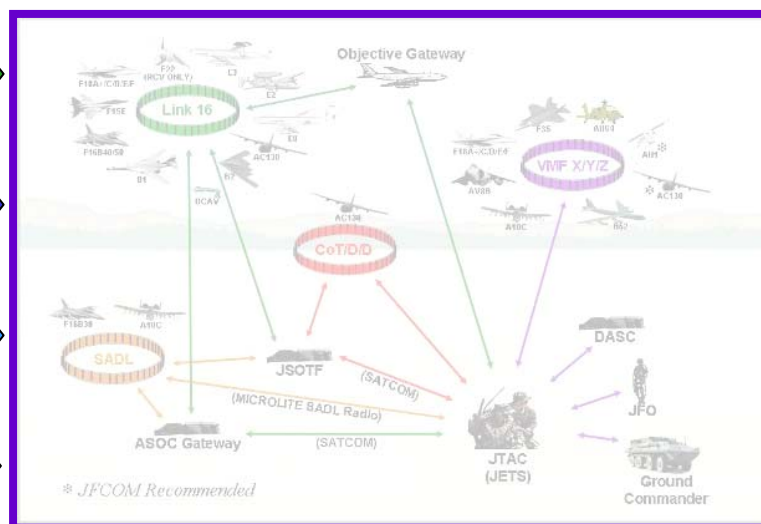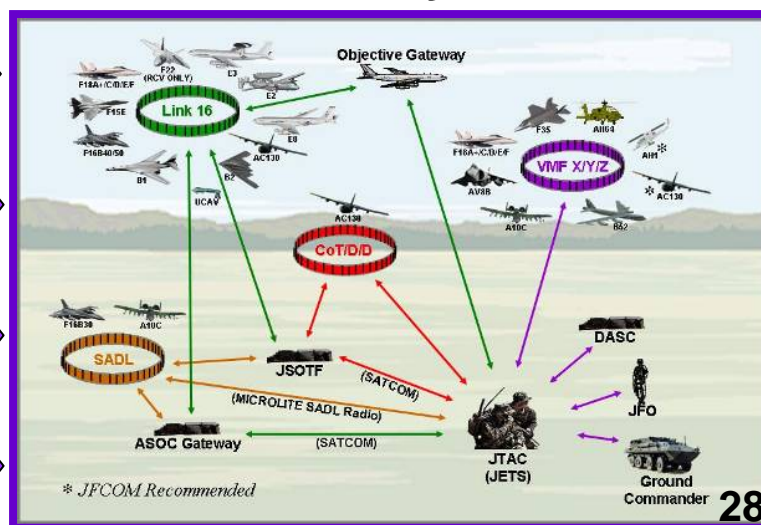
Capability Portfolio Manager

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Service Focused Requirements Produce Service Focused Systems

AH-64 JTAC	→	**Army Unique System Requirements**	→
FA-18E/F	→	**Navy Unique System Requirements**	→
F-15E, A-10, B-1 B-52, AC-130 BAO Kit, F-22	→	**Air Force Unique System Requirements**	→
AV-8B, AH-1 FA-18C/D Strike Link	→	**Marine Unique System Requirements**	→
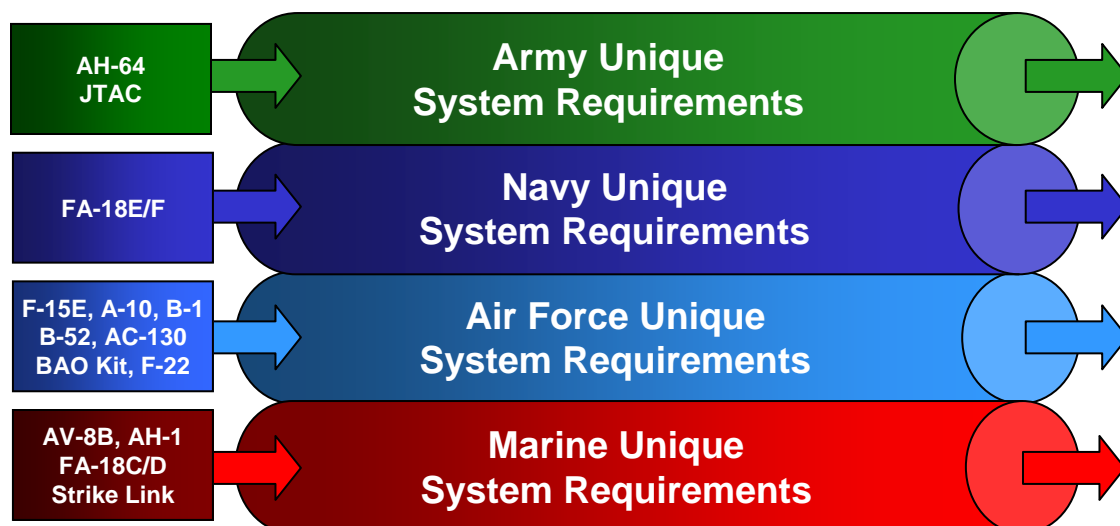
CPM Focused Requirements Produce Joint Focused Systems

System of System Solutions

- **Joint Architecture**
- **Standards Profiles**
- **Configuration Control**

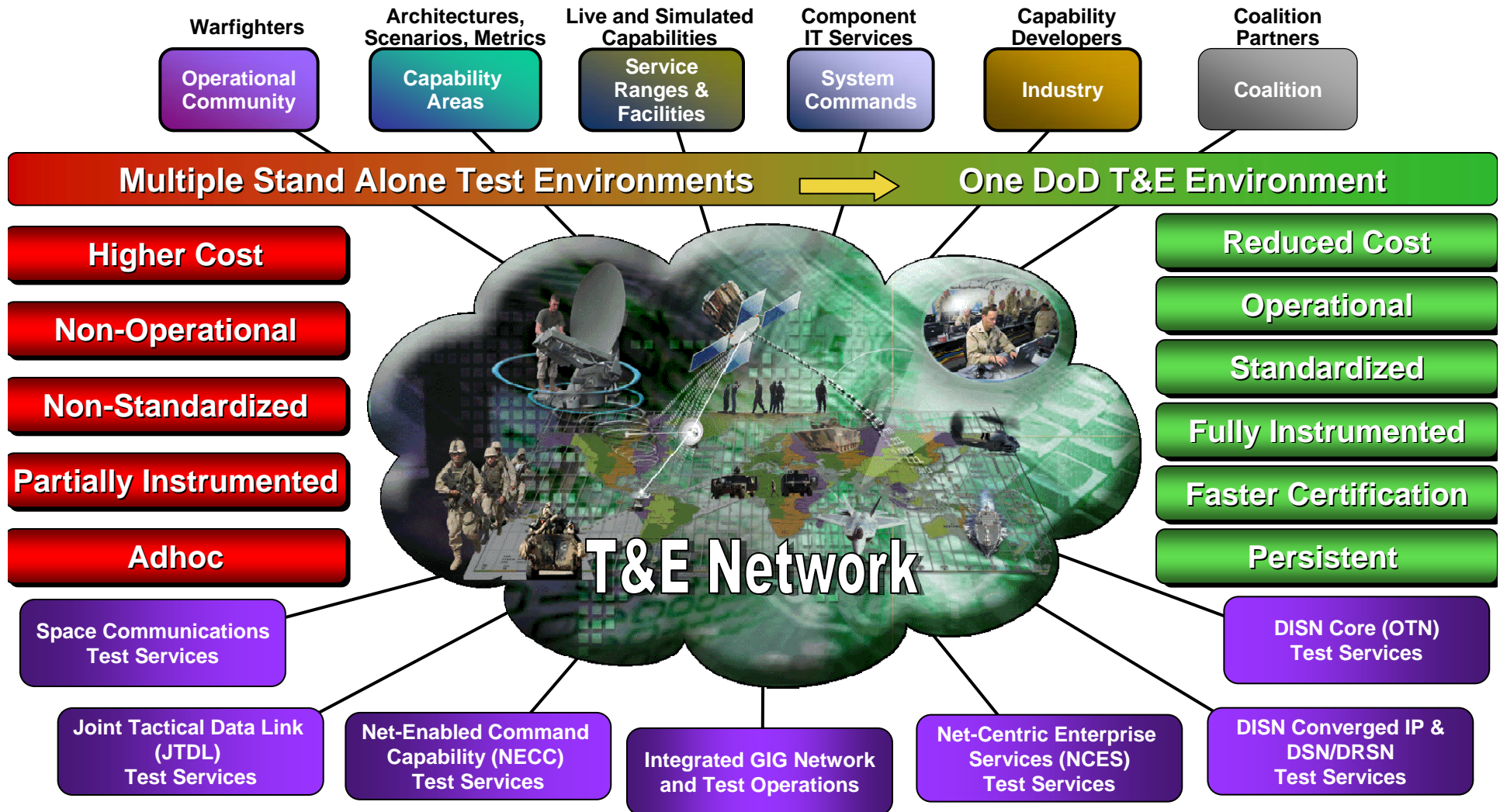| **Army Unique System Requirements** | → |
Navy Unique System Requirements	→
Air Force Unique System Requirements	→
Marine Unique System Requirements	→

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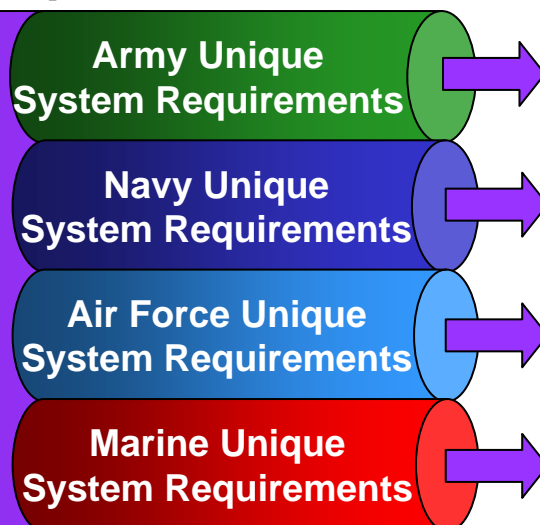
Proposed Way Ahead

CPM Activities

- Establish portfolio ontology, operational architecture and data strategy
- Establish mission area authoritative data sources
- Sponsor CPM test, experimentation and piloting events
- Direct DOTMLPF changes as needed to enhance/maintain interoperability
- Oversee/influence configuration management of joint capabilities

JITC Support

- Provide input to architecture development for testability and interoperability
- Serve as executive agent for CPM sponsored test/experimentation events
- Provide Joint Interoperability Certification/Assessment letters that outline system compliance with key CPM requirements
- Establish distributed CPM T&E Federations
- Establish CPM T&E NetOps Center

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Future Test & Evaluation Environment

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Warfighters	Architectures, Scenarios, Metrics	Live and Simulated Capabilities	Component IT Services	Capability Developers	Coalition Partners
Operational Community	Capability Areas	Service Ranges & Facilities	System Commands	Industry	Coalition

Multiple Stand Alone Test Environments → One DoD T&E Environment

Higher Cost	Reduced Cost
Non-Operational	Operational
Non-Standardized	Standardized
Partially Instrumented	Fully Instrumented
Adhoc	Faster Certification
	Persistent

T&E Network

Space Communications Test Services

DISN Core (OTN) Test Services

Joint Tactical Data Link (JTDL) Test Services

Net-Enabled Command Capability (NECC) Test Services

Integrated GIG Network and Test Operations

Net-Centric Enterprise Services (NCES) Test Services

DISN Converged IP & DSN/DRSN Test Services

DISA MRTFB Capability Provisioning and World Wide Connectivity

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JITC
Provides Unparalleled WARFIGHTER Support

The **BATTLEGROUND** should **not** be the **TESTING GROUND**